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ABSTRACT

The possibility of gender-related differences in student motivation throughout their schooling was investigated in this study. Subjects were 538 elementary-school students, 1,519 high-school students, and 2,434 junior-college students from the Montreal (Quebec, Canada) area. The Adolescents Academic Motivation Scale was administered to assess students' motivational styles toward two main academic activities, "going to school" and "doing homework." Findings indicated that motivation does not occur under the same conditions for males and females. Results support the existence of gender-related differences across all levels of schooling. From grade 6 to junior college, girls are significantly more self-determined and less externally regulated and amotivated toward academic activities than boys who, in contrast, are significantly less self-determined. This gap in academic motivation is even more significant considering that more boys drop out of school than girls (in the Montreal areas, 42% compared to 28%, at the high school level). Because gender-related differences in motivational styles could have a great impact on teaching, learning and the evolution of our society, it seems imperative that future research focus on their antecedents. (Contains 32 references and 9 figures.) (TS)

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MOTIVATION PROFILE OF ADOLESCENT BOYS AND GIRLS: GENDER DIFFERENCES THROUGHOUT SCHOOLING

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The passivity that is the essential characteristic of the "feminine" woman is a trait that develops in her from the earliest years. But it is wrong to assert a biological datum is concerned; it is in fact a destiny imposed upon her by her teachers and by society.

Simone de Beauvoir

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INTRODUCTION

Motivation, a force that energizes and directs behavior toward a goal (Eggen and Kauchak, 1994), could certainly be perceived as one of the most important psychological concepts in education (Vallerand, Blais, Brière and Pelletier, 1992). Student motivation is critical for learning, and several researchers have found a positive and robust correlation between motivation and achievement to prove it (Vallerand and Senecal, 1993; Tuckman, 1994). A series of commission reports, several special issues of scholarly and professional journals, many books, as well as our friends and family, have reminded us that the problem of motivation in adolescence remains. In Canada, this problem is particularly prominent when we look at education and the dropout rate at the high school level. The province of Quebec (Canada) has one of the highest school dropout rates in the world (for an industrialized country): almost 40% of adolescents drop out before completing high school. According to Anderman and Maehr (1994), Vallerand and Senecal (1993), as well as others, such a problem could be attributed in great part to a lack of motivation toward school.

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Since the beginning of the century, the concept of motivation has been studied from several perspectives (Freud, 1923; Hull, 1943; Skinner, 1953). One perspective which has proven useful over the past 20 years suggests that an action can be seen as intrinsically or extrinsically motivated (de Charms, 1968). A study by Harter, Whitesell and Kowalski (1992) showed a systematic shift from a predominantly intrinsic motivation orientation in elementary school to a more extrinsic motivation orientation by ninth grade. Other studies (Gottfried, 1985; Anderman and Midgley, 1992; Migdley et Urdan, 1992) documented a similar decline of intrinsic motivation.

OBJECTIVE

The primary purpose of the present study is to examine individual differences in the motivational profile of adolescent boys and girls, from grade 6 to junior college. Investigating differences in academic motivation among boys and girls throughout the schooling process seems important in order to better understand the psychological development involved.

THEORETICAL FRAMEWORK

Several conceptual perspectives have been proposed to better describe academic motivation. The theory developed by Deci and Ryan (1985, 1991) is interesting in that it proposes three main types of motivation, placed along a self-determination continuum (Figure 1). These are amotivation (AMO), extrinsic motivation (EM) and intrinsic motivation (IM). This theoretical approach, detailed below, has generated a considerable amount of research and appears rather pertinent for the field of education. Furthermore, the construct developed by Deci and Ryan permits us to assess motivation in a multidimensional fashion. These types of motivation go beyond the usual intrinsic/extrinsic dichotomy and allow for a more accurate analysis of motivation in education, thereby opening the door to innovative research.

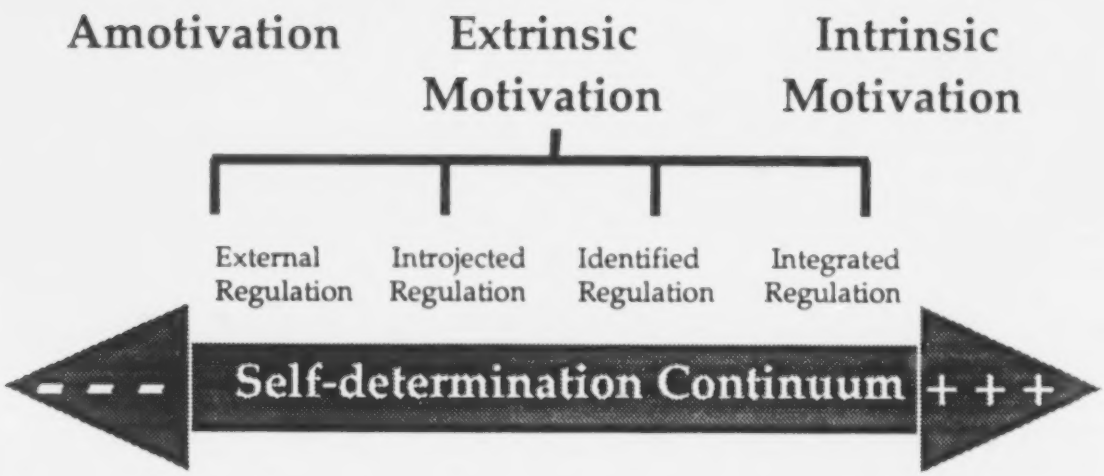

Figure 1
Representation of the self-determination continuum developed by Deci and Ryan (1985, 1991).

In general, intrinsic motivation refers to being in an activity for itself, and the pleasure and satisfaction derived from participation (Deci, 1975). Contrary to intrinsic motivation, extrinsic motivation pertains to a wide variety of behaviours where the goals of action extend beyond those inherent in the activity itself. They are actions which are engaged in as means to an end and not for their own sake (Deci, 1975). Originally, it was thought that EM referred to actions performed without self-determination, and could therefore only be prompted by external contingencies. However, Deci, Ryan (1985, 1991) have elaborated a self-determination theory. According to this theory, various types of EM exist, some of which are self-determined and may be performed through self-regulation. These researchers claim that there are four types of EM, also ordered along a self-determination continuum. From lower to higher levels of self-determination, they are: external, introjected, identified and integrated regulation.

External regulation corresponds to EM as it generally appears in the literature. That is, action is regulated through external means such as rewards and constraints. With introjected regulation, the individuals begin to internalize the reasons for their actions. However, this form of internalization, while internal to the person, is not truly self-determined since it is limited to the internalization of past external contingencies (Vallerand, Blais, Brière and Pelletier, 1989). To the extent that the action becomes valued by the individual, and especially that it is perceived as chosen by the individual himself, then the internalization of extrinsic motives becomes regulated through identified regulation. The most self determined form of EM is referred to as integrated regulation. According to Deci and Ryan (1991), integrated regulation occurs when the individual's action is perceived as personally valued and willingly performed. Thus, integrated action is authentic.

An increasing amount of research has been undertaken to evaluate Deci and Ryan's EM formulation. The results consistently support the basic premises of the formulation. For instance, results from confirmatory factor analyses on the motivation scales have supported the presence of three types of EM in education (Ryan & Connell, 1989; Vallerand and *al.*, 1989; Karsenti, 1993).

Along with intrinsic and extrinsic motivation, Deci and Ryan (1985, 1991) have posited that a third type of motivational construct must be considered in order to fully understand academic motivation. This concept is termed amotivation (AMO). Individuals are amotivated when they do not perceive a link between outcomes and their own actions. They are neither intrinsically nor extrinsically motivated. They are non-motivated. In many ways, motivation can be seen as similar to learned helplessness (Abramson, Seligman and Teasdale, 1978) as individuals experience feelings of incompetence, and expectancies of uncontrollability. When students are in such a state, they perceive their actions as caused by forces out of their own control. Eventually, they may stop the action (Vallerand and *al.*, 1989).

METHOD

Subjects

Subjects were 538 elementary-school students (278 female and 260 male), 1519 high-school students (810 female and 709 male) and 2434 junior-college students (1463 female and 971 male) from the Montreal area (Quebec, Canada). Elementary-school subjects had a mean age of 10 years, high-school subjects had a mean age of 14 years and junior-college subjects had a mean age of 18 years.

Measures (Questionnaire)

In Canada, a new measure of motivation toward education, the *Academic Motivation Scale*[1] (AMS), has been developed by Vallerand and his colleagues (1989). This scale is based on the tenets of the self-determination theory and is composed of five subscales assessing amotivation, three types of extrinsic motivation (external, introjected, and identified regulation), and intrinsic motivation.

Integrated regulation was not assessed in the AMS because pilot data revealed that integrated regulation did not come out as a perceived reason for participating in educational activities. Moreover, factor analyses on experimental forms of the AMS (Vallerand and *al.*, 1989; Karsenti, 1993) revealed that integrated regulation did not distinguish itself from identified regulation.

The scale used in the present study is an adaptation of the AMS for adolescents, the AAMS (*Adolescents Academic Motivation Scale*). Extensive data from various studies (Karsenti, 1993; Karsenti and Thibert, 1994) support the reliability and validity of the AAMS. Concerning the reliability of the scale, results from this study reveal that the internal consistency (Cronbach alpha) of all subscales is excellent, exceptionally ranging from .89 to .94.

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[1] In French, the Échelle de Motivation en Éducation.

With respect to the validity of the AAMS, the present results are also very encouraging. A factor analysis confirms the five-factor structure of the AAMS and thus provided some support for the factorial validity of the scale.

There are 28 items in the AAMS. The rating is on a 1-7 Likert scale with 7 representing maximum appropriateness. The AAMS assesses students' motivational styles toward academic activities. Similar to Ryan and Connell's *Self-Regulation Questionnaire* (1989), the AAMS assesses intrinsic motivation and external regulation, introjection and identification toward two main academic activities, *'going to school'* and *'doing homework'*. In addition, the AAMS also assesses amotivation in the two types of academic activities. Thus, the AAMS assesses most of the concepts proposed in Deci and Ryan's theory.

The operational definition of the AAMS, similar to the scale of Vallerand and *al.* (1989), reflects the conceptual definition of intrinsic and extrinsic motivation which refers to one's perceived reasons for engaging in a given activity, be they for the activity itself or for reasons lying outside the activity.

Procedures

All students were asked to complete the questionnaire described above (with some personal data: name, age, gender, etc.) eight weeks after the beginning of the school year. A standard explanation was given to all the students involved.

RESULTS

Summary statistics and correlations among students' motivation scores for the 5 subscales and gender reveal that four of the five types of motivation are significantly related to gender throughout schooling. Our findings reveal that girls are more self-determined (IM and EM identified, see figures 3-9) and less externally regulated and amotivated (figures 2-9) toward academic activities than boys. These results are consistent throughout all levels of schooling, from grade 6 to junior college.

DISCUSSION

This study is an attempt at investigating the possibility of gender-related differences in student motivation throughout their schooling. This question arose from the works of Carone (1975) and Deci, Cascio, and Krusell (1973), among others, who found that certain rewards tended to have an adverse effect on the motivation of female, but not male, student subjects. Maccoby and Jacklin (1975) reviewed a large body of research and concluded that one of the most consistently found gender difference involves cognitive functioning. There is also both intuitive and empirical evidence for the differential socialization of male and female students. Female students are said to be trained, among other things, to inhibit independent assertiveness (Donelson, 1967), to evaluate themselves in terms of others' approval (Bardwick, 1977), and to be given less competence-eliciting playthings (Williams, 1979). Green and Foster (1986: 36-38) argue that *"the classroom is not a very important area for the display of masculine competence (...). Girls, in contrast, have fewer other opportunities for displaying competence, are encouraged to prefer more passive pursuits (...)"*. In light of this , it seems logical to find in our study that motivation does not occur under the same conditions for males and females. Our results support the existence of gender-related differences across all levels of schooling. From grade 6 to junior college, girls are significantly more self-determined (IM, EM identified) than boys who, in contrast, are significantly less self-determined (amotivation). This gap in academic motivation is even more significant considering that more boys drop out of schools than girls (in the Montreal area, 42 % compared to 28 %, at the high school level). Because gender-related differences in motivational styles could have a great impact on teaching, learning and the evolution of our society, it seems imperative that future research focus on their antecedents.

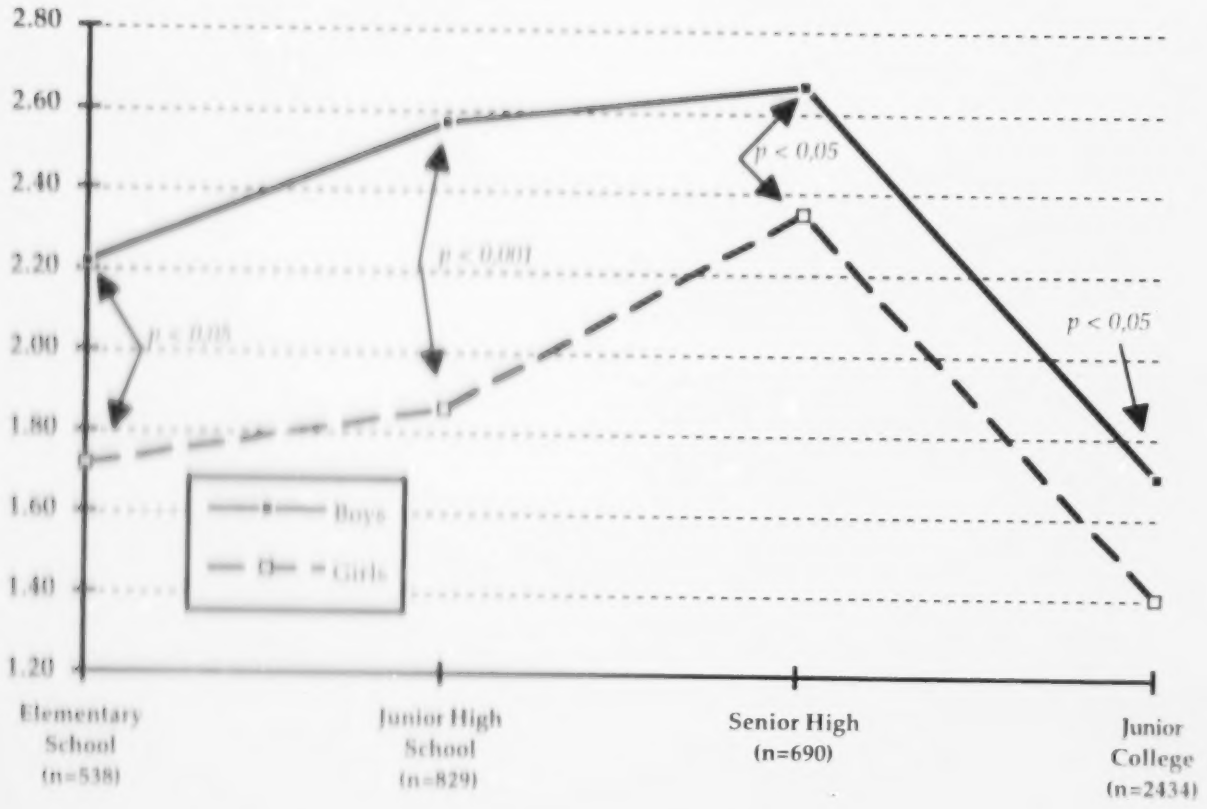

FIGURE 2
GENDER-RELATED DIFFERENCES IN AMOTIVATION

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

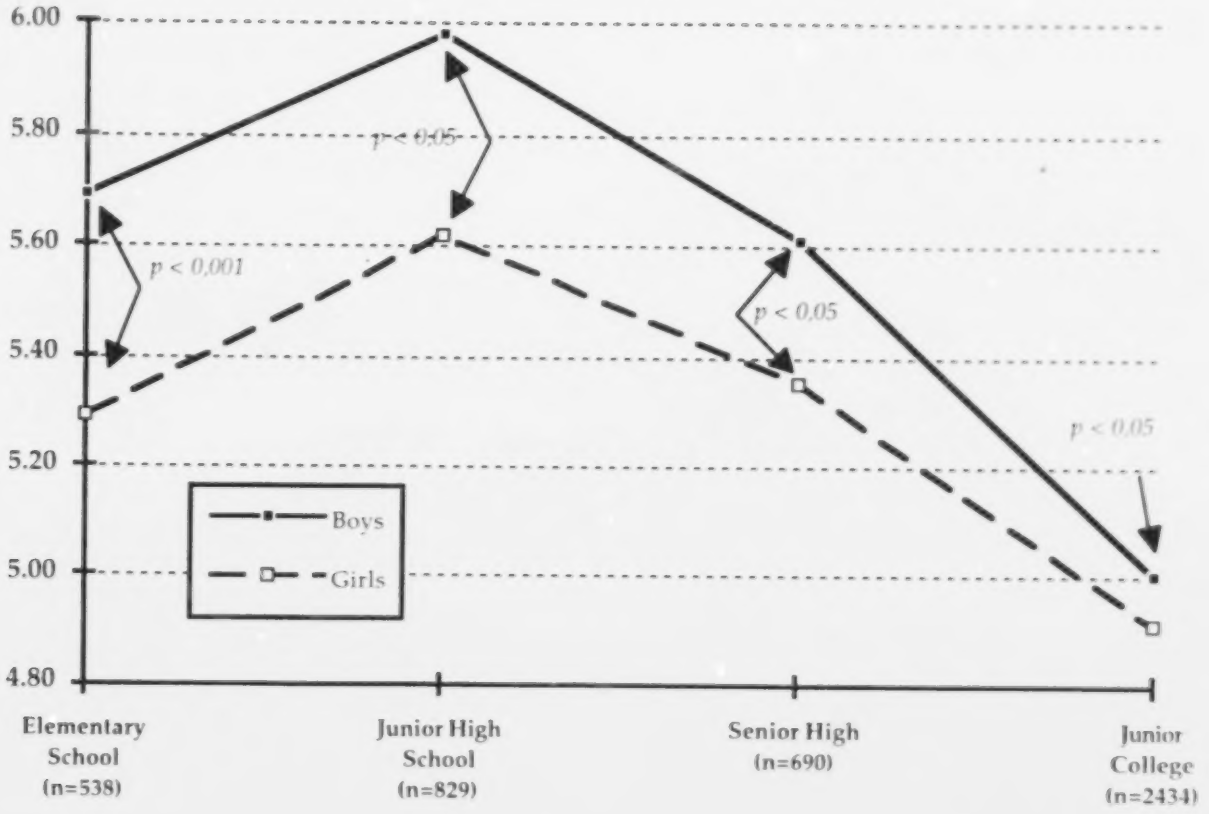

FIGURE 3
GENDER-RELATED DIFFERENCES IN EXTRINSIC MOTIVATION (EXTERNAL REGULATION)

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

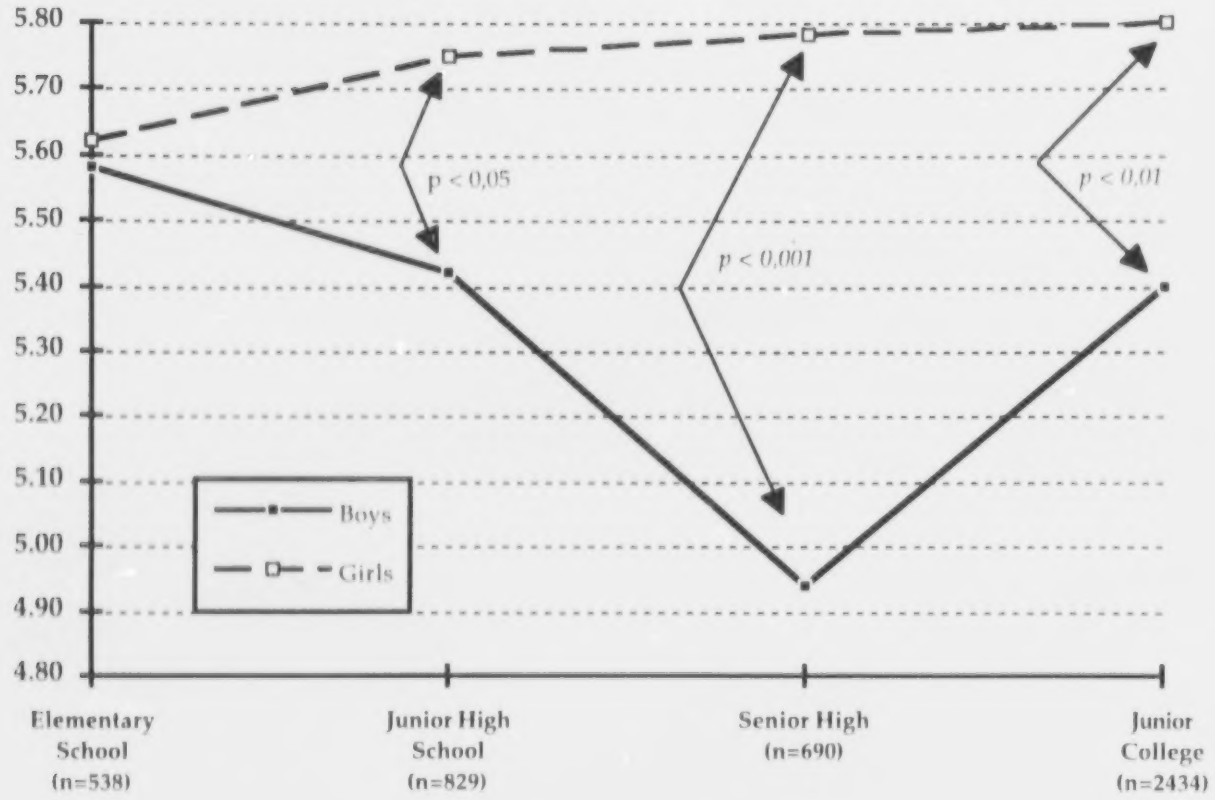

FIGURE 4
GENDER-RELATED DIFFERENCES IN EXTRINSIC MOTIVATION (IDENTIFICATION)

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

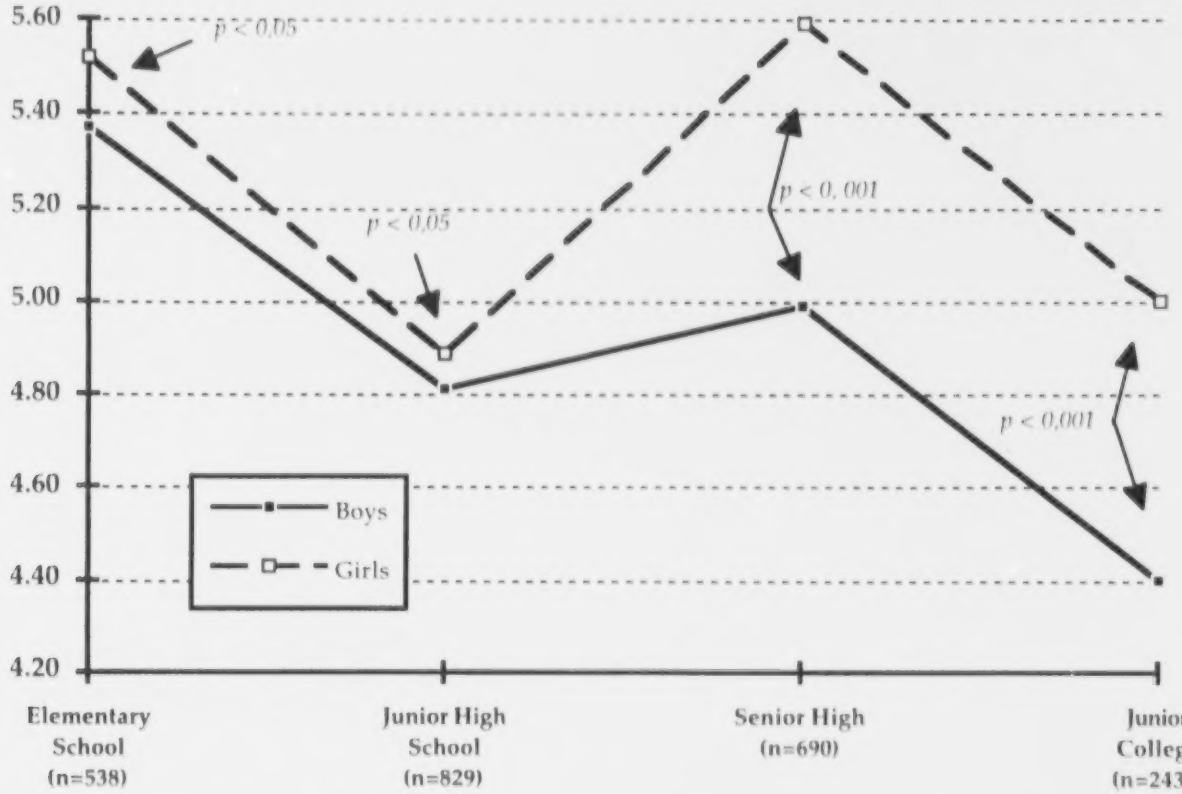

FIGURE 5
GENDER-RELATED DIFFERENCES IN INTRINSIC MOTIVATION

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

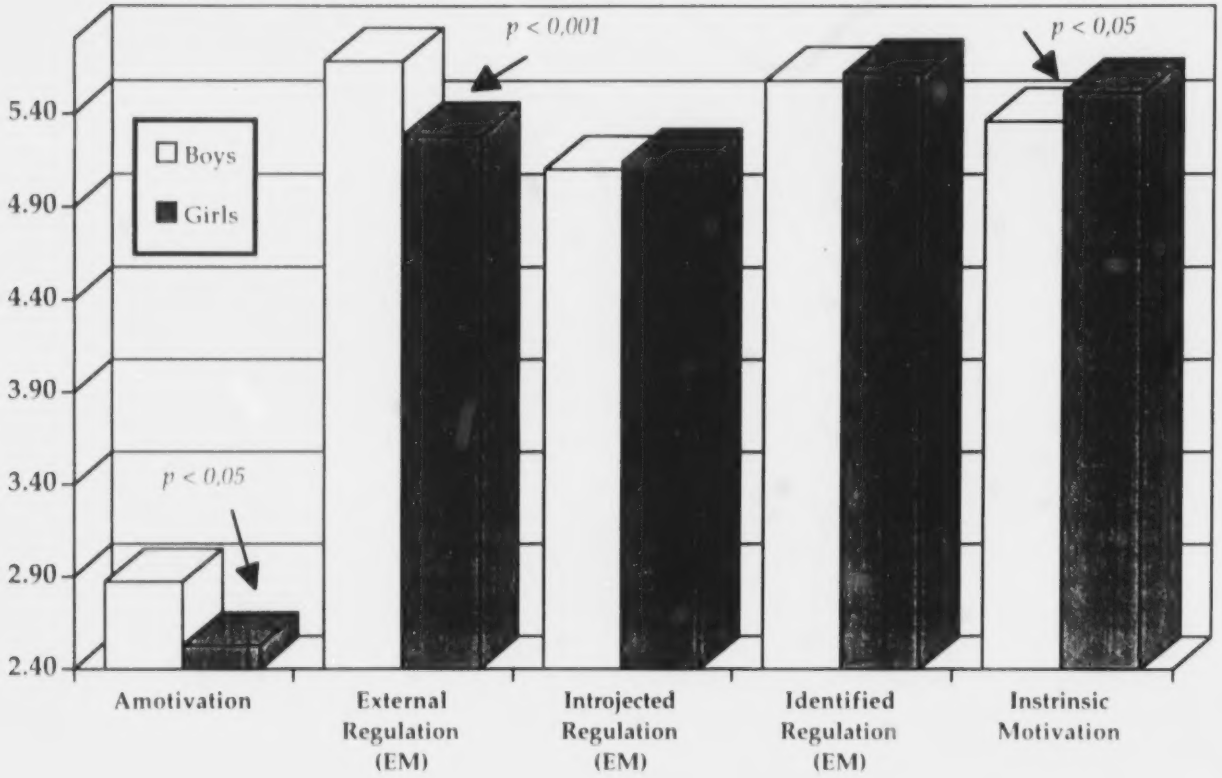

FIGURE 6
GENDER-RELATED DIFFERENCES AT THE ELEMENTARY LEVEL

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

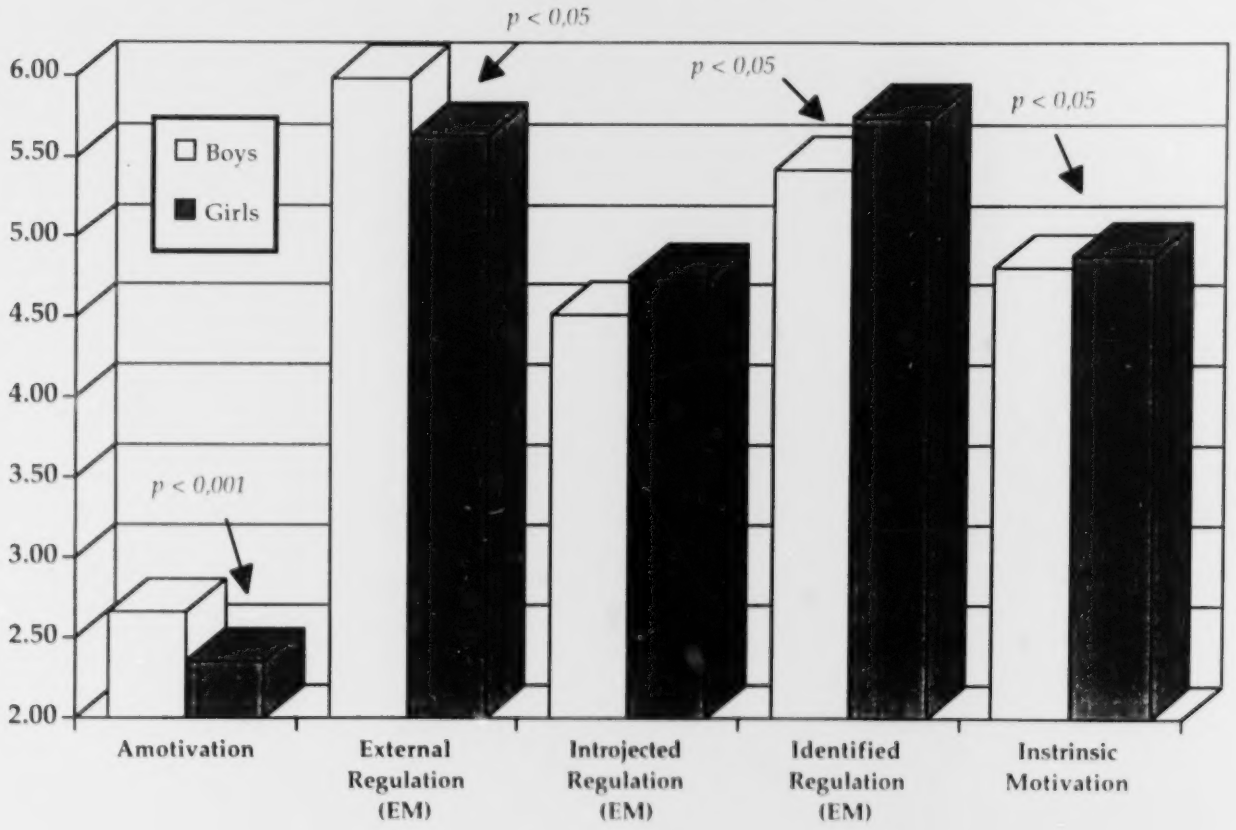

FIGURE 7
GENDER-RELATED DIFFERENCES IN JUNIOR HIGH SCHOOL

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

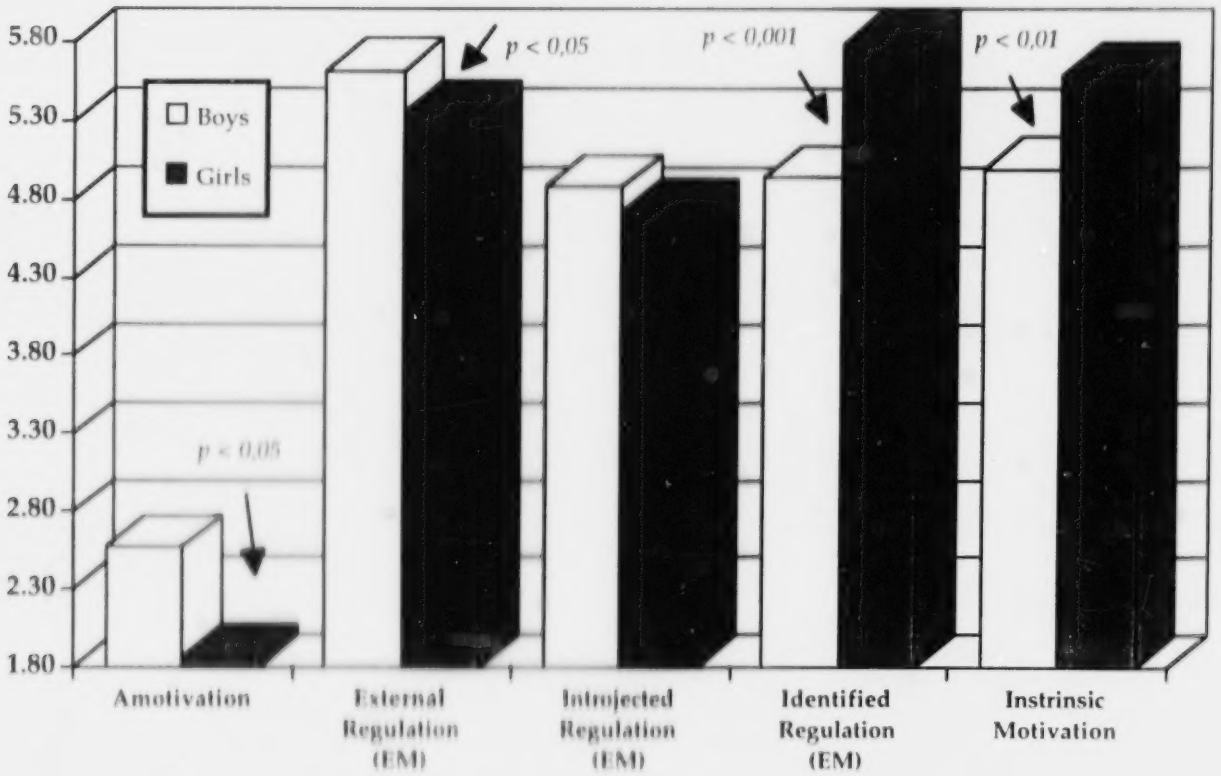

FIGURE 8
GENDER-RELATED DIFFERENCES IN SENIOR HIGH SCHOOL

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

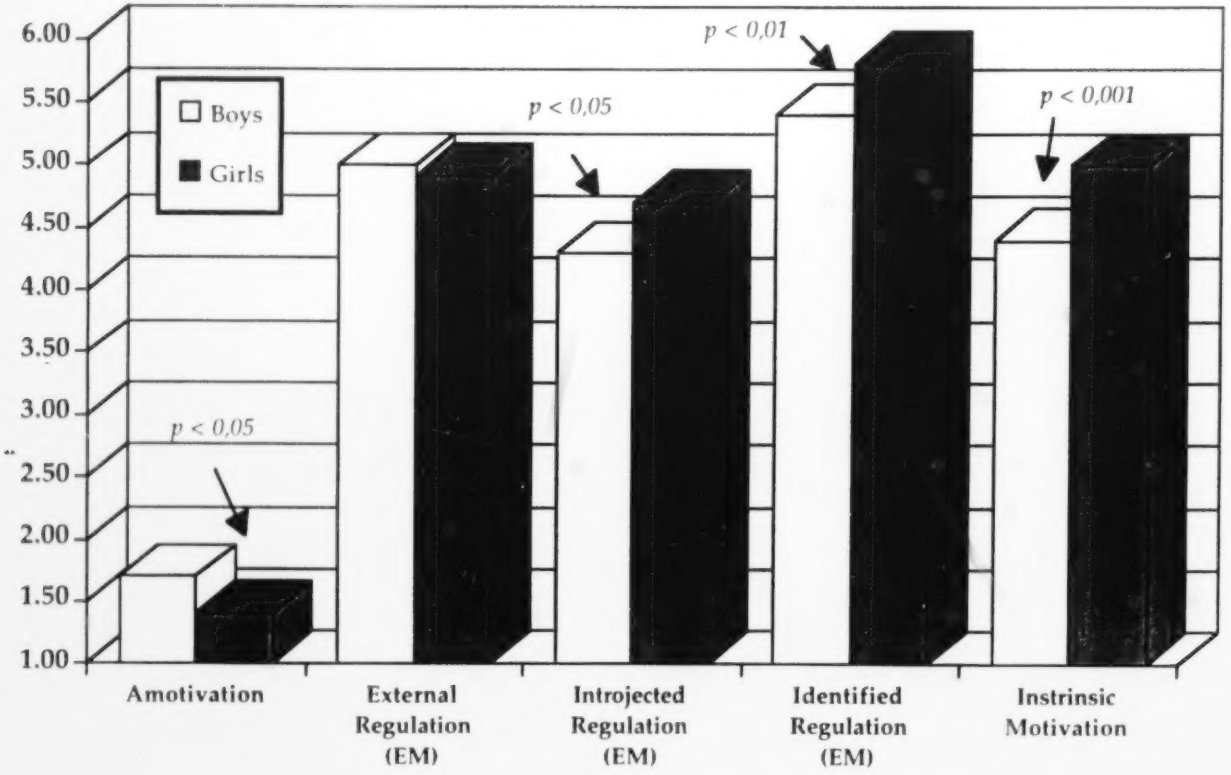

FIGURE 9
GENDER-RELATED DIFFERENCES IN JUNIOR COLLEGE

* The rating was on a 1-7 Likert scale, with 7 representing maximum appropriateness.

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